

WHAT IS CLAIMED IS:

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1. A calculator, comprising:

(a) means for recognizing handwritten input, wherein the handwritten input comprises mathematical operators and
5 operands; and

(b) means for performing calculations indicated by the mathematical operators and operands.

2. A calculator, comprising:

10 (a) an electronic input surface;

(b) a stylus for tracing on the electronic input surface; and

(c) a processing circuit, coupled to the electronic input surface, for recording movements of the stylus as it
15 traces across the electronic input surface, for recognizing the recorded movements of the stylus as characters, for converting the characters into mathematical expressions, and for performing calculations indicated by the mathematical expressions.

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3. A method of performing calculations in a calculator having an electronic input surface, a stylus for tracing across the electronic input surface, and a processing circuit coupled to the electronic input surface,
5 the method comprising the steps of:

(a) recording movements of the stylus in the processing circuit, as the stylus is traced across the electronic input surface;

(b) recognizing the recorded movements of the stylus
10 as characters in the processing circuit;

(c) converting the characters into mathematical expressions in the processing circuit; and

(d) performing calculations indicated by the mathematical expressions in the processing circuit.

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4. The invention as set forth in claim 3, wherein an electronic monitor is coupled to the processing circuit, and further comprising the step of displaying a result of the performed calculations on the electronic monitor.

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5. The invention as set forth in claim 4, further comprising the step of displaying the recorded movements of the stylus on the electronic monitor.

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6. The invention as set forth in claim 5, wherein the electronic monitor is the electronic input surface.

7. The invention as set forth in claim 3 above,
wherein the mathematical expressions comprise operands and
operators traced on the electronic input surface by the
stylus.

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8. The invention as set forth in claim 7, wherein
the operands comprise symbols.

9. The invention as set forth in claim 7, wherein
10 the operands comprise digits.

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10. The invention as set forth in claim ³~~9~~ above,
further comprising the step of recognizing numbers from the
relative placement of the digits, so that when the digits
15 are traced horizontally in close proximity to one another
on the electronic input surface, they are considered to be
a single number.

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20 11. The invention as set forth in claim 7 above,
further comprising the step of recognizing mathematical
expressions traced horizontally and vertically on the
electronic input surface.

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12. The invention as set forth in claim 7 above,
further comprising the step of computing a result for the
calculations when the user traces a result operator on the
electronic input surface.

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~~13~~. The invention as set forth in claim ⁶~~12~~ above,
wherein the result operator is an equal sign in a
horizontal mathematical expression.

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10 ~~14~~. The invention as set forth in claim ⁶~~12~~ above,
wherein the result operator is a result line in a vertical
mathematical expression.

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15 ~~15~~. The invention as set forth in claim ¹~~3~~ above,
further comprising the step of animating expressions on the
electronic input surface as they are being calculated.

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20 ~~16~~. The invention as set forth in claim 3 above,
further comprising the step of accepting corrections in the
mathematical expressions traced by the stylus in the
electronic input surface.

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25 ~~17~~. The invention as set forth in claim ¹~~3~~ above,
further comprising the step of logically linking together a
plurality of mathematical expressions inscribed on the
electronic input surface.

Sub ^{B¹⁴} 18. The invention as set forth in claim 17 above, wherein the mathematical expressions are linked in response to their proximity to one another on the electronic input surface.

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19. The invention as set forth in claim 17 above, wherein the mathematical expressions are linked in response to a user tracing a linking operator on the electronic input surface.

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20. The invention as set forth in claim 19 above, wherein the linking operator is an arrow having a tail proximal a first operand or mathematical expression and a head proximal a second operator or mathematical expression.

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~~21~~. The invention as set forth in claim ¹⁴~~20~~ above, wherein a result from the first mathematical expression is an operand in the second mathematical expression. ✓

Sub ²⁰ ^{B¹⁵} 22. The invention as set forth in claim 20 above, further comprising the step of re-computing the second mathematical expression when the first mathematical expression is altered on the electronic input surface.

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23. The invention as set forth in claim 17 above,
further comprising re-computing at least two mathematical
expressions logically linked together, thereby
incorporating a result of a first calculation into a second
5 calculation.

24. The invention as set forth in claim 17 above,
further comprising re-computing first and second
mathematical expressions logically linked together, wherein
10 the first and second mathematical expressions are on
separate pages displayed on an electronic monitor, thereby
incorporating the result of the first mathematical
expression into the second mathematical expression.

15 25. The invention as set forth in claim 17 above,
further comprising re-computing first and second
mathematical expressions logically connected together,
wherein the first and second mathematical expressions are
in separate applications executed by the processing
20 circuit, thereby incorporating the result of the first
mathematical expression into the second mathematical
expression.